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Fig. 1A

```
ANT1m ATCATCAAGATCTTCAAGTCTGATGGCCTGAGGGGGGCTCTACCAGGGTTTCAACGTCTCTGTCCAAGGCATCATTATCTA 557
ANT2m CTGGTTAAGATCTACAAATCTGATGGGATTAAGGGCCTGTACCAAGGCTTTAACGTGTCTGTGCAGGGTATTATCATCTA 560
ANT3m CTGGTGAAGATCACCAAGTCCGACGGCATCCGGGGCCTGTACCAGGGCTTCAGTGTCTCCGTGCAGGGCATCATCATCTA 560

ANT1m TAGAGCTGCCTACTTCGGAGTCTATGATACTGCCAAGGGGATGCTGCCTGACCCCAAGAACGTGCACATTTTTGTGAGCT 637
ANT2m CCGAGCCGCCTACTTCGGTATCTATGACACTGCAAAGGGAATGCTTCCGGATCCCAAGAACACTCACATCGTCATCAGCT 640
ANT3m CCGGGCGGCCTACTTCGGCGTGTACGATACGGCCAAGGGCATGCTCCCGACCCCAAGAACACGCACATCGTGGTGAGCT 640

ANT1m GGATGATTGCCCAGAGTGTGACGGCAGTCGCAGGGCTGCTGTCCTACCCCTTTGACACTGTTCGTCGTACAAATGATGATG 717
ANT2m GGATGATCGCACAGACTGTCACTGCTGTTGCCGGGTTGACTTCCTATCCATTTGACACTGTTCGCCGCCGCATGATGATG 720
ANT3m GGATGATCGCGCAGACCGTGACGGCCGTGGCCGGCGTGGTGTCCTACCCCTTCGACACGGTGCGGCGGCGCATGATGATG 720

ANT1m CAGTCCGGCCGGAAAGGGGCCGATATTATGTACACGGGGACAGTTGACTGCTGGAGGAAGATTGCAAAAGACGAAGGAGC 797
ANT2m CAGTCAGGGCGCAAAGGAACTGACATCATGTACACAGGCACGCTTGACTGCTGGCGGAAGATTGCTCGTGATGAAGGAGG 800
ANT3m CAGTCCGGGCGCAAAGGAGCTGACATCATGTACACGGGCACCGTCGACTGTTGGAGGAAGATCTTCAGAGATGAGGGGGG 800

ANT1m CAAGGCCTTCTTCAAAGGTGCCTGGTCCAATGTGCTGAGAGGCATGGGCGGTGCTTTTGTATTGGTGTTGTATGATGAGA 877
ANT2m CAAAGCTTTTTTCAAGGGTGCATGGTCCAATGTTCTCAGAGGCATGGGTGGTGCTTTTGTGCTTGTCTTGTATGATGAAA 880
ANT3m CAAGGCCTTCTTCAAGGGTGCGTGGTCCAAGGTCCTGGGGGGCATGGGGGGCGCCTTCGTGCTGGTCCTGTACGACGAGC 880

ANT1m TCAAAAAATATGTCTAA 894
ANT2m TCAAGAAGTACACATAA 897
ANT3m TCAAGAAGGTGATCTAA 897
```

Fig. 1B

```
HANT1p  MGDHAWSFLKDFLAGAVAAAVSKTAVAPIERVKLLLQVQHASKQISAEKQ  50
HANT2p  MTDAAVSFAKDFLAGGVAAAISKTAVAPIERVKLLLQVQHASKQITADKQ  50
HANT3p  MTEQAISFAKDFLAGGIAAAISKTAVAPIERVKLLLQVQHASKQIAADKQ  50

HANT1p  YKGIIDCVVRIPKEQGFLSFWRGNLANVIRYFPTQALNFAFKDKYKQLFL  100
HANT2p  YKGIIDCVVRIPKEQEVLSFWRGNLANVIRYFPTQALNFAFKDKYKQIFL  100
HANT3p  YKGIMDCIVRIPKEQGVLSFWRGNLANVIRYFPTQALNFAFKDKYKQIFL  100

HANT1p  GGVDRHKQFWRYFAGNLASGGAAGATSLCFVYPLDFARTRLAADVGRR-A  149
HANT2p  GGVDKRTQFWLYFAGNLASGGAAGATSLCFVYPLDFARTRLAADVGKAGA  150
HANT3p  GGVDKHTQFWRYFAGNLASGGAAGATSLCFVYPLDFARTRLAADVGKSGT  150

HANT1p  QREFHGLGDCIIKIFKSDGLRGLYQGFNVSVQGIIIYRAAYFGVYDTAKG  199
HANT2p  EREFRGLGDCLVKIYKSDGIKGLYQGFNVSVQGIIIYRAAYFGIYDTAKG  200
HANT3p  EREFRGLGDCLVKIIKSDGIRGLYQGFSVSVQGIIIYRAAYFGVYDTAKG  200

HANT1p  MLPDPKNVHIFVSWMIAQSVTAVAGLLSYPFDTVRRRMMMQSGRKGADIM  249
HANT2p  MLPDPKNTHIVISWMIAQTVTAVAGLTSYPFDTVRRRMMMQSGRKGTDIM  250
HANT3p  MLPDPKNTHIVVSWMIAQTVTAVAGVVSYPFDTVRRRMMMQSGRKGADIM  250

HANT1p  YTGTVDCWRKIAKDEGAKAFFKGAWSNVLRGMGGAFVLVLYDEIKKYV.  298
HANT2p  YTGTLDCWRKIARDEGGKAFFKGAWSNVLRGMGGAFVLVLYDEIKKYT.  299
HANT3p  YTGTVDCWRKIFRDEGGKAFFKGAWSNVLRGMGGAFVLVLYDELKKVI.  299
```

Fig. 2

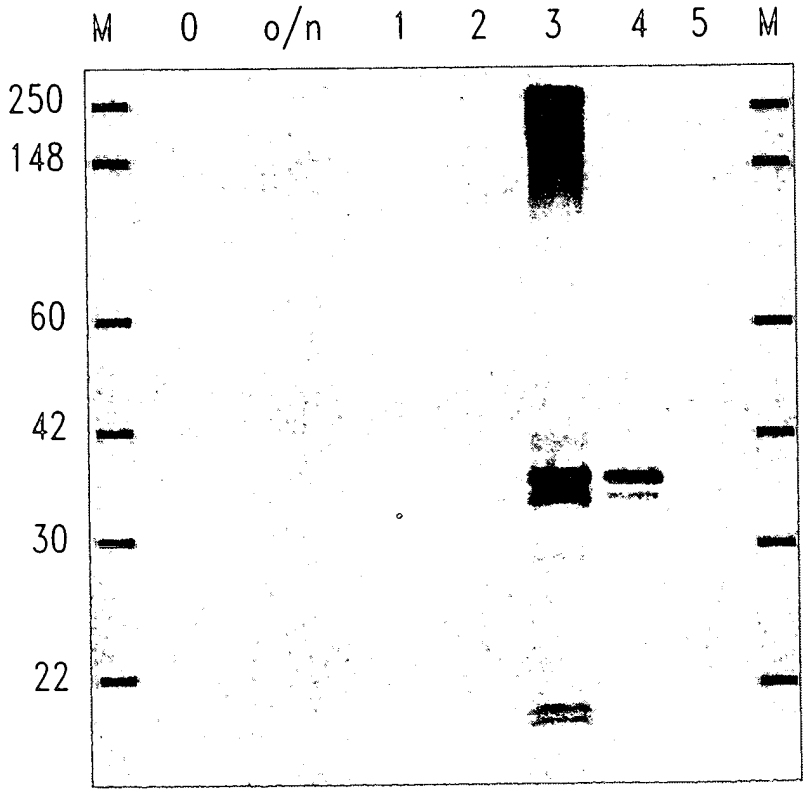

Fig. 3

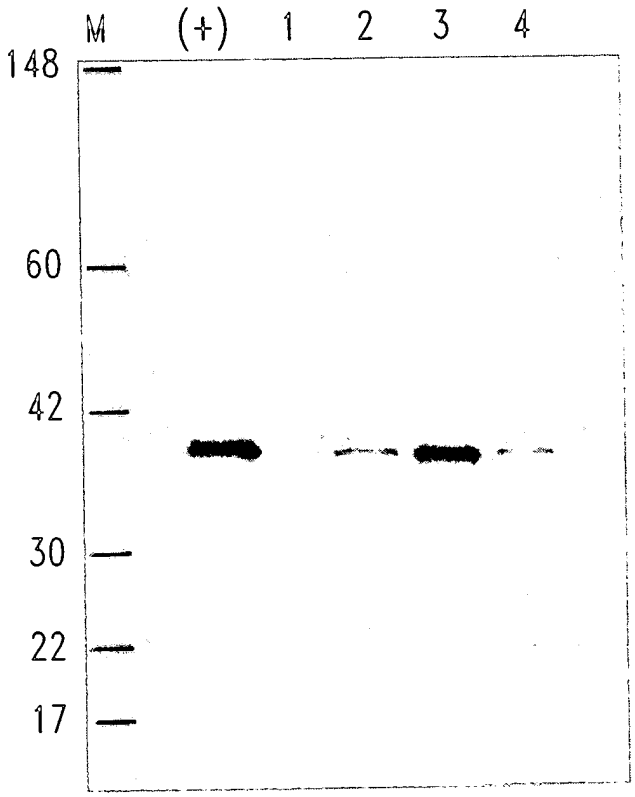

Fig. 4

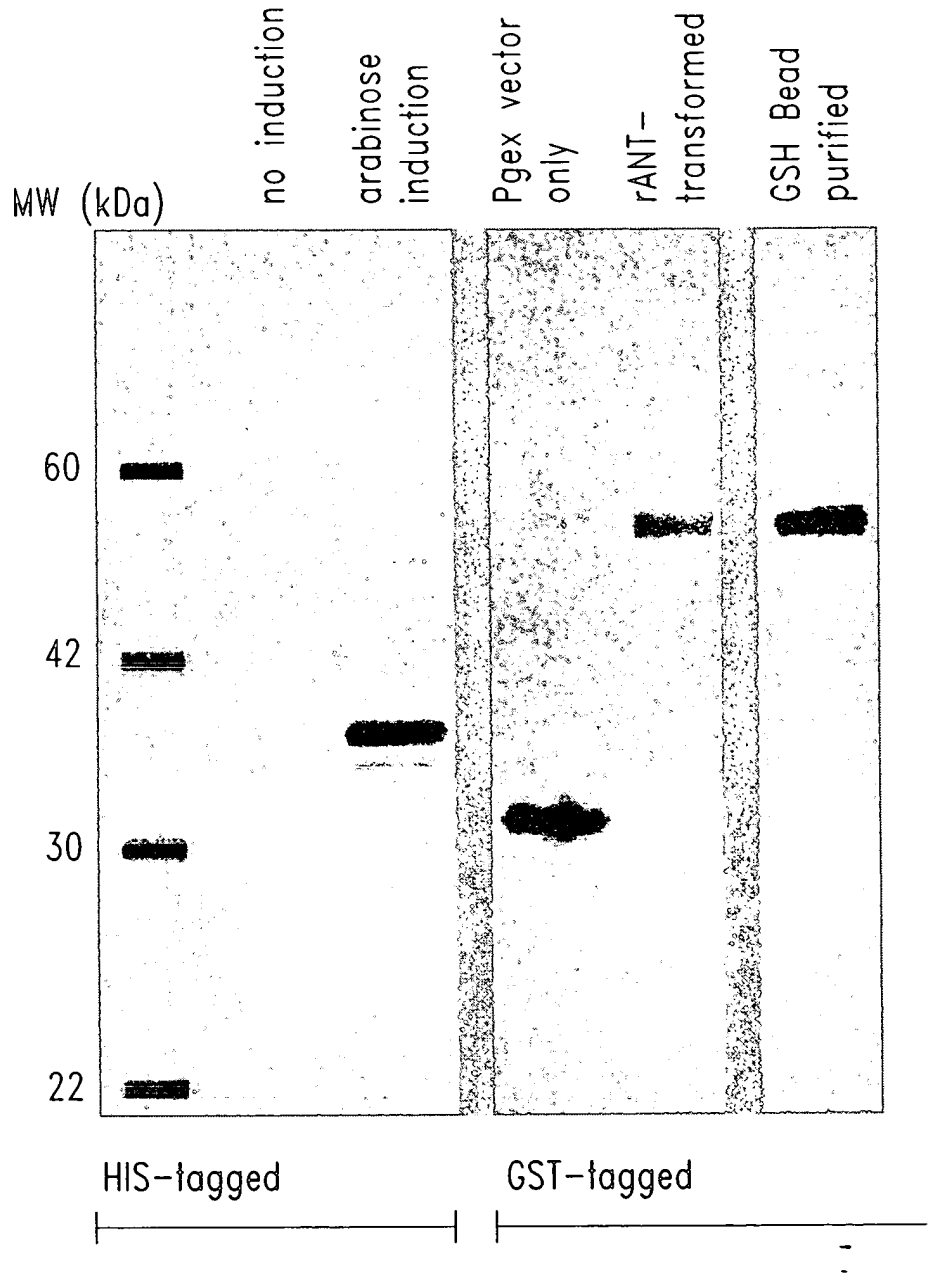
MW (kDa)
no induction
arabinose induction
Pgex vector only
rANT-transformed
GSH Bead purified
60
42
30
22
HIS-tagged
GST-tagged

Fig. 5

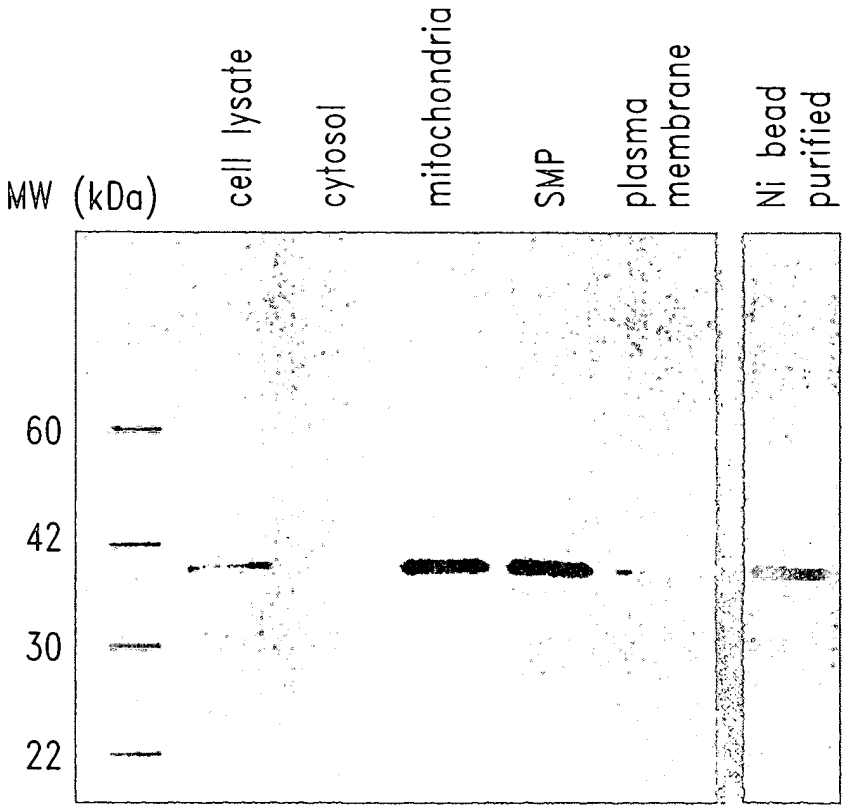
MW (kDa)
cell lysate
cytosol
mitochondria
SMP
plasma membrane
Ni bead purified
60
42
30
22

Fig. 6

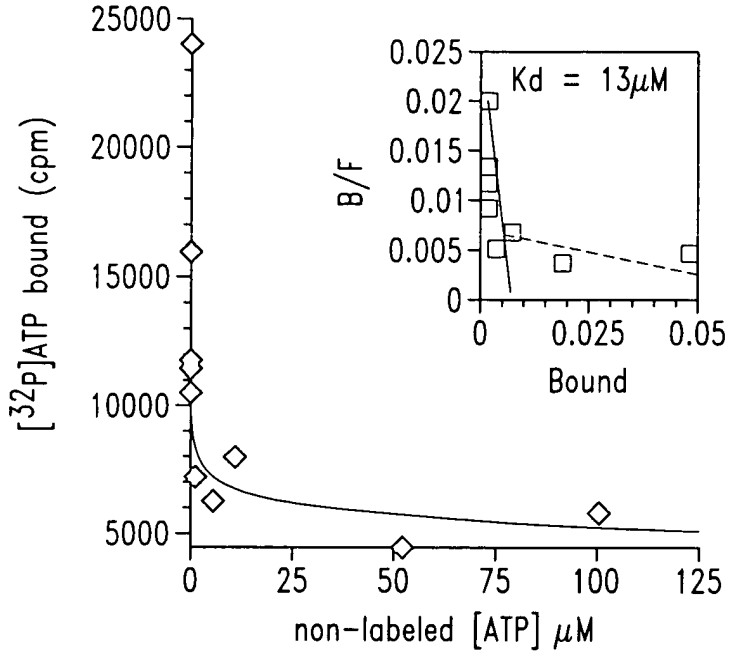
25000
20000
15000
10000
5000
[32P]ATP bound (cpm)
0
25
50
75
100
125
non-labeled [ATP] μM
0.025
0.02
0.015
0.01
0.005
0
B/F
Kd = 13μM
0
0.025
0.05
Bound

Fig. 7

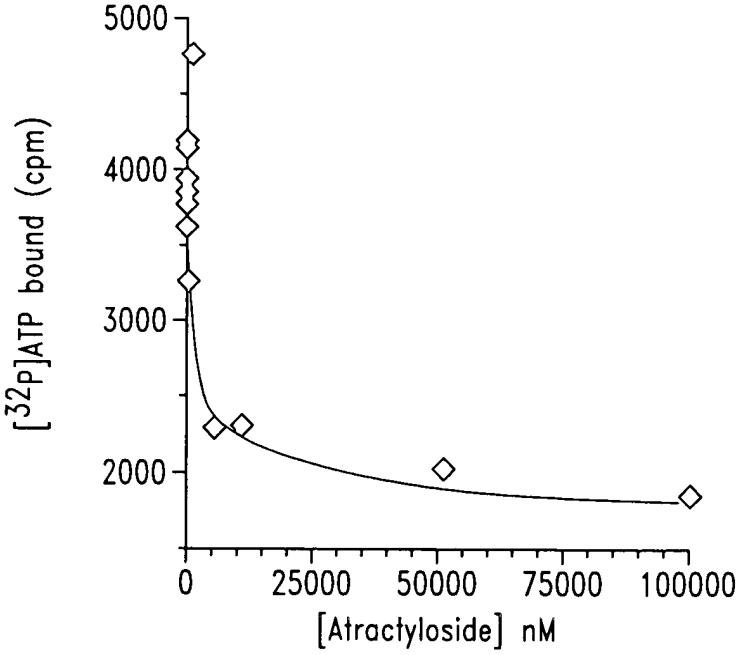
5000
4000
3000
2000
[32P]ATP bound (cpm)
0
25000
50000
75000
100000
[Atractyloside] nM

Fig. 8

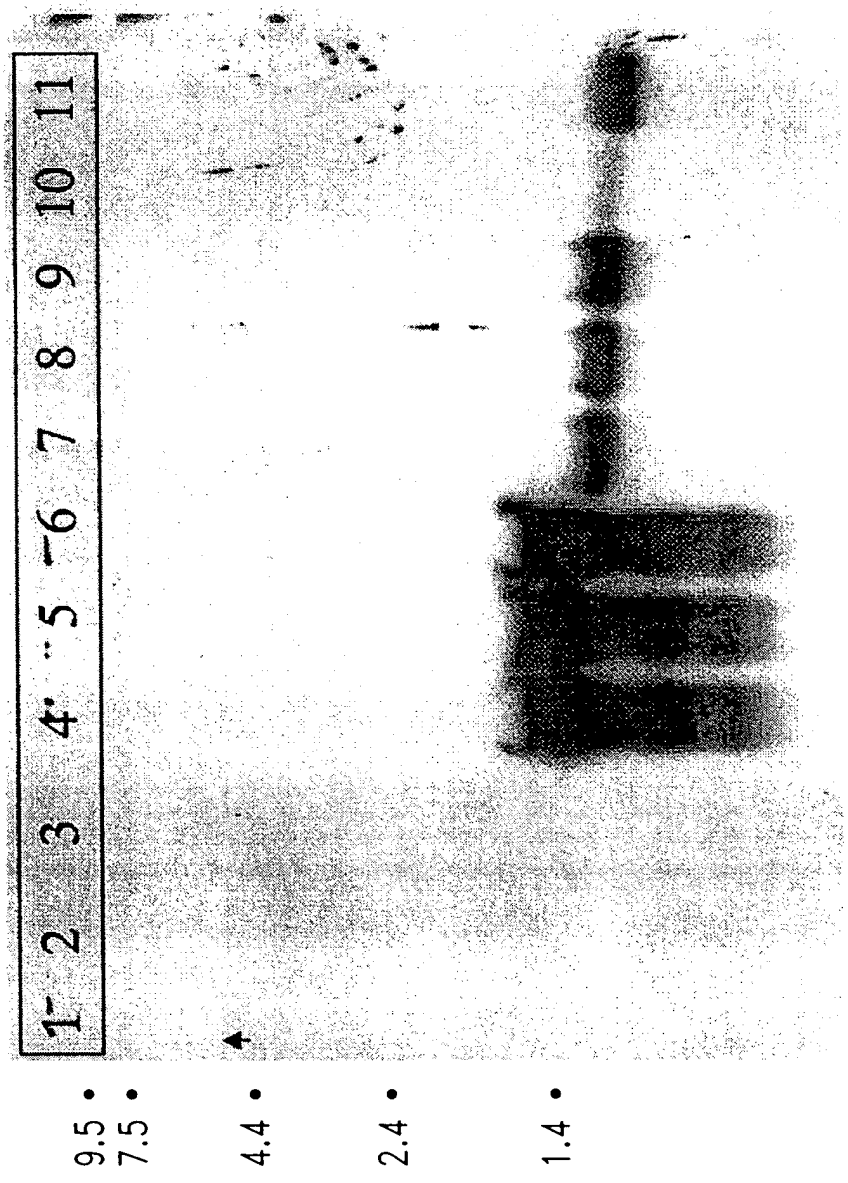

Fig. 10

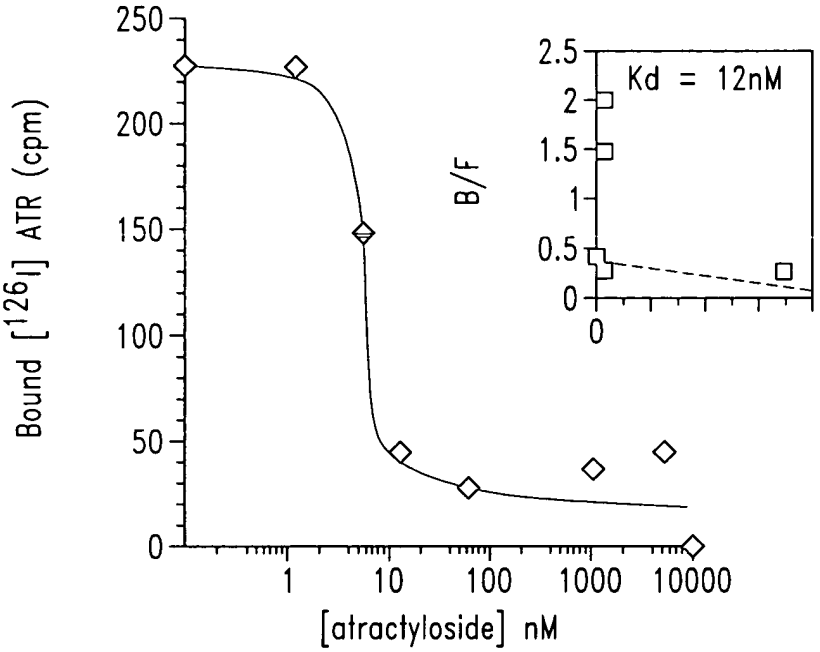
Bound [^{126}I] ATR (cpm)
250
200
150
100
50
0
1
10
100
1000
10000
[atractyloside] nM
B/F
2.5
2
1.5
1
0.5
0
0
Kd = 12nM

Fig. 9

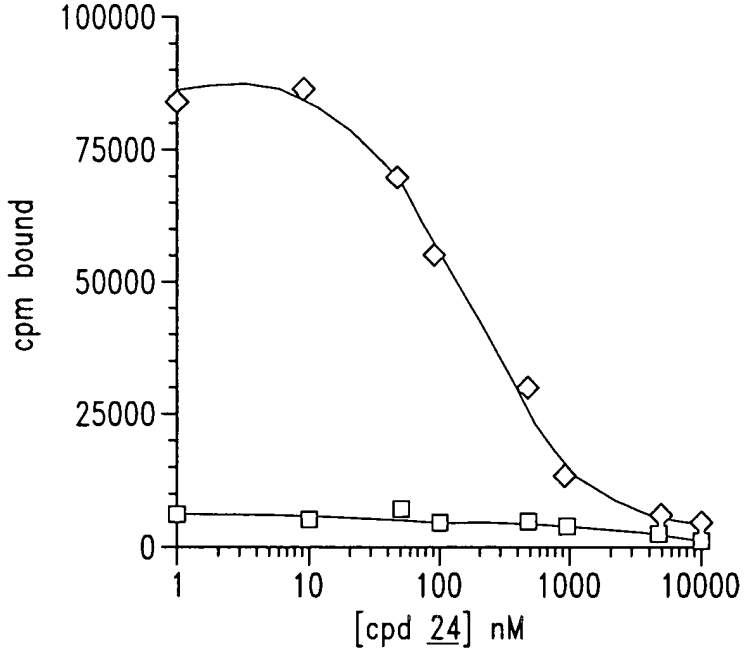
cpm bound
100000
75000
50000
25000
0
1
10
100
1000
10000
[cpd 24] nM

Fig. 11

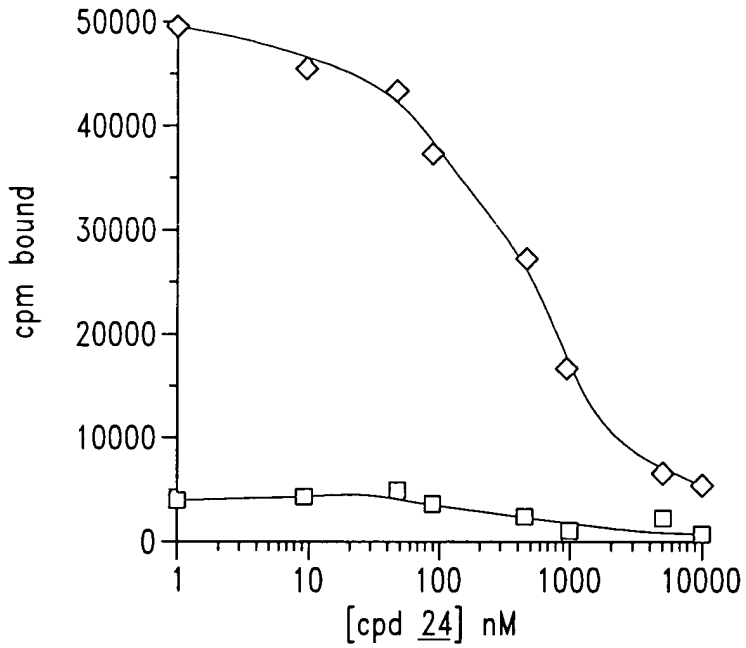
50000
40000
30000
20000
10000
0
cpm bound
1
10
100
1000
10000
[cpd 24] nM

Fig. 12

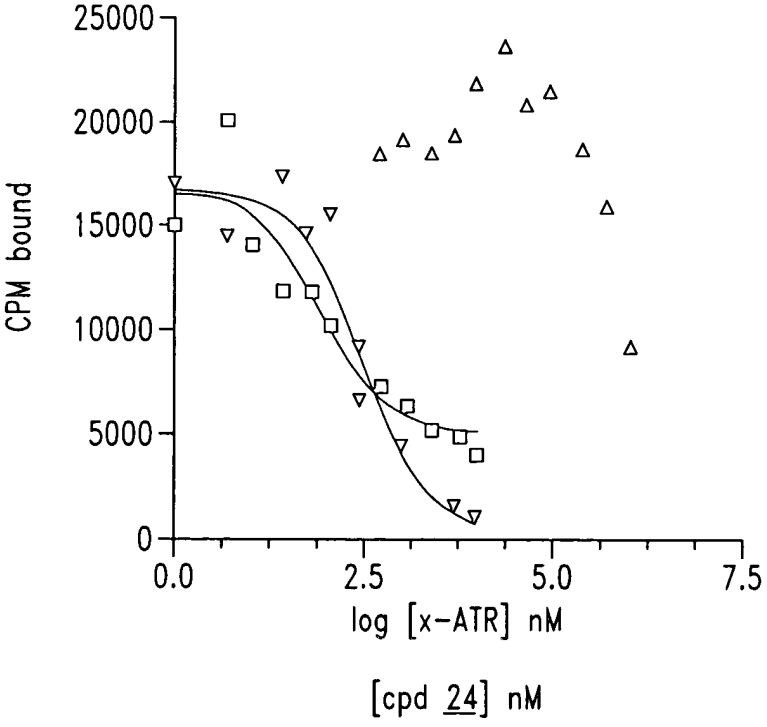
25000
20000
15000
10000
5000
0
CPM bound
0.0
2.5
5.0
7.5
log [x-ATR] nM
[cpd 24] nM

Fig. 13

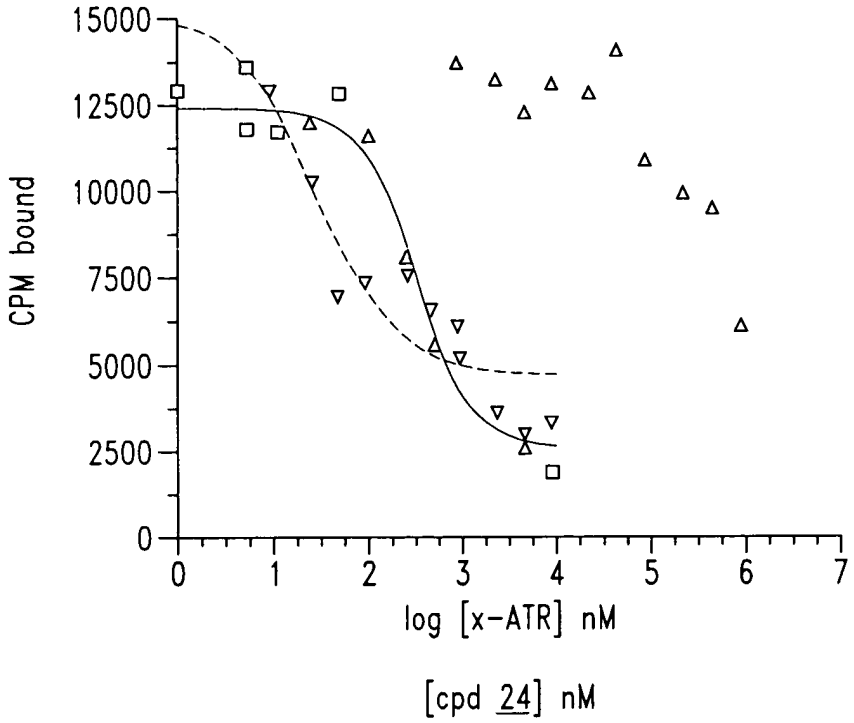
15000
12500
10000
7500
5000
2500
0
CPM bound
0
1
2
3
4
5
6
7
log [x-ATR] nM
[cpd 24] nM

Fig. 14

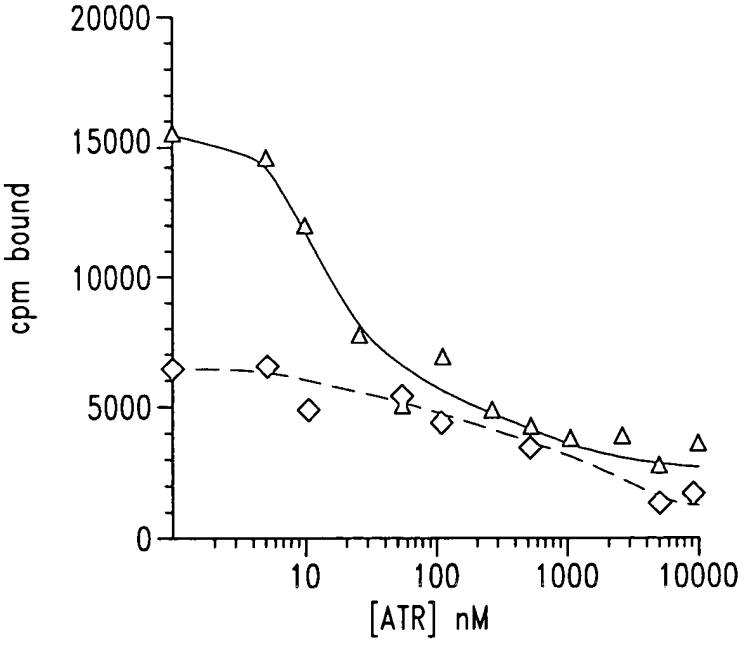
20000
15000
10000
5000
0
cpm bound
10
100
1000
10000
[ATR] nM

Fig. 15

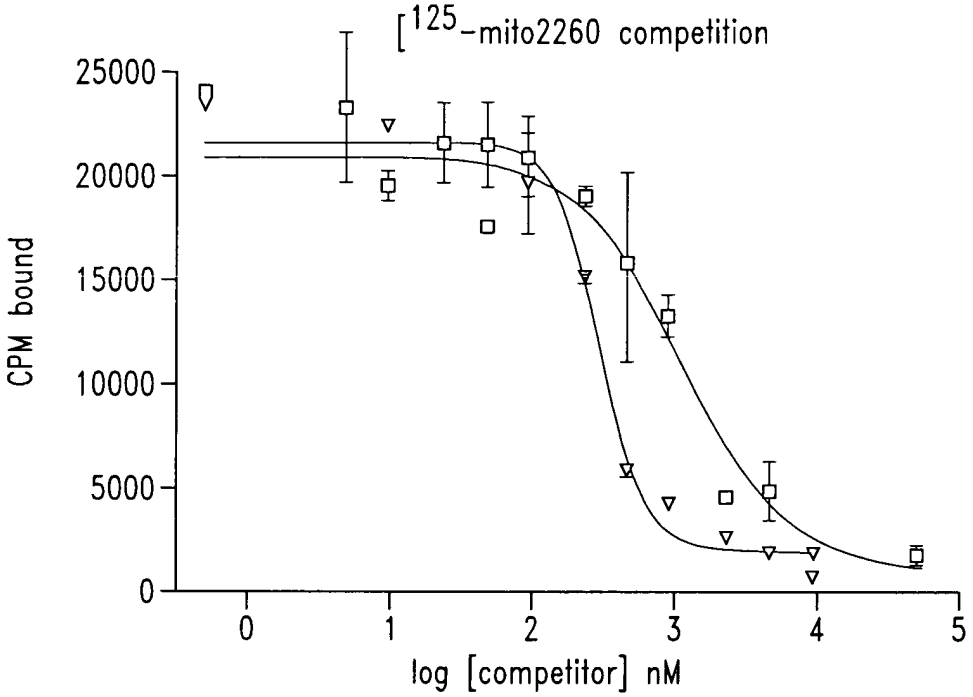
[125-mito2260 competition
CPM bound
25000
20000
15000
10000
5000
0
0
1
2
3
4
5
log [competitor] nM

Fig. 16

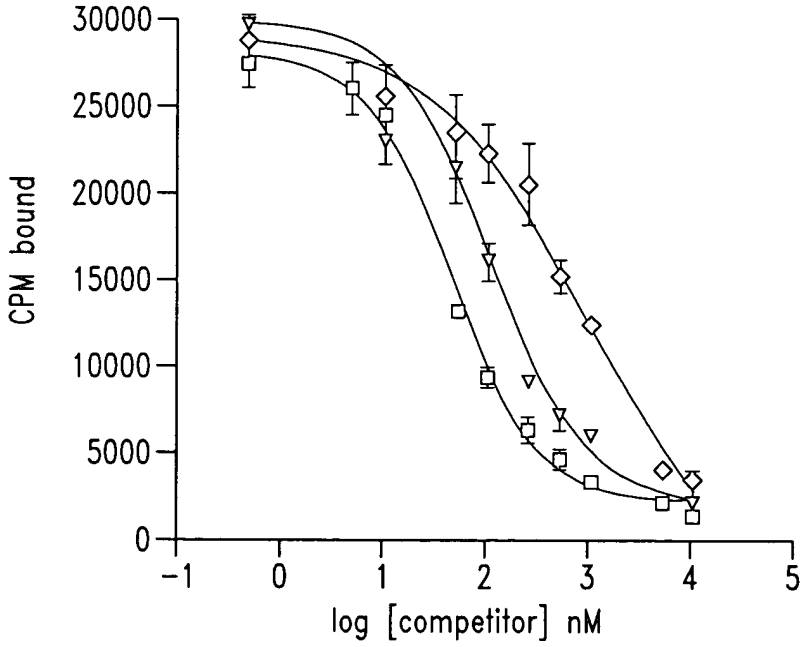
CPM bound
30000
25000
20000
15000
10000
5000
0
-1
0
1
2
3
4
5
log [competitor] nM

Fig. 17

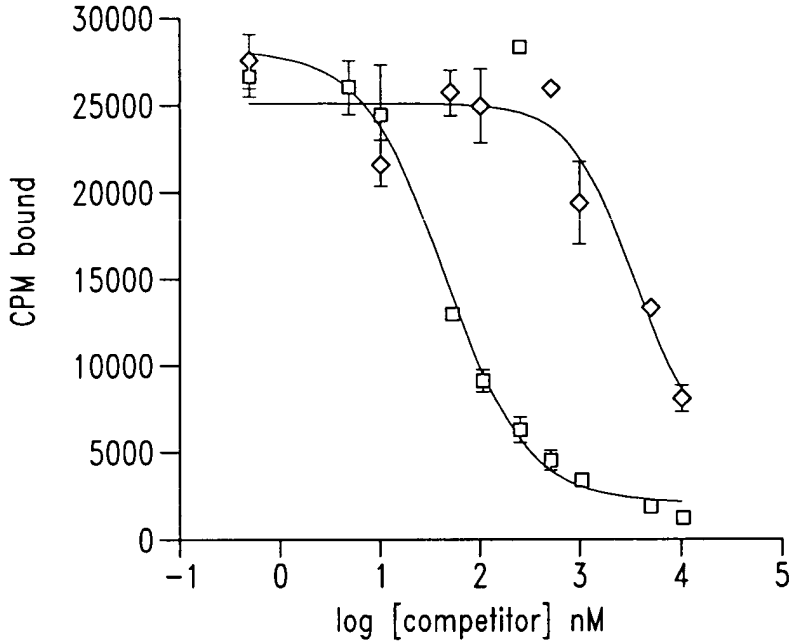
30000
25000
20000
15000
10000
5000
0
CPM bound
-1
0
1
2
3
4
5
log [competitor] nM

Fig. 18

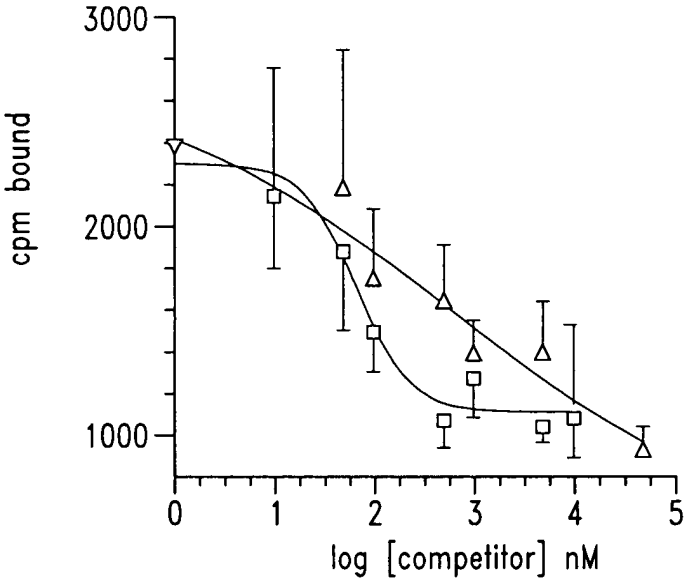
3000
2000
1000
cpm bound
0
1
2
3
4
5
log [competitor] nM

Fig. 19